



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/581,557

06/02/2006

Yasutomo Okajima

1343.46164X00

6205

20457

7590

10/17/2008

ANTONELLI, TERRY, STOUT & KRAUS, LLP  
1300 NORTH SEVENTEENTH STREET  
SUITE 1800  
ARLINGTON, VA 22209-3873

EXAMINER

PETERSON, KENNETH E

ART UNIT

PAPER NUMBER

3724

MAIL DATE

DELIVERY MODE

10/17/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/581,557	<b>Applicant(s)</b> OKAJIMA ET AL.	
	<b>Examiner</b> Kenneth Peterson	<b>Art Unit</b> 3724	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 27 August 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) 6-21 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 22 and 23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

Art Unit: 3724

1. Claims 6-21 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected group, there being no allowable generic or linking claim. Election was made without traverse in the reply filed on 27 August 08.

2. Examiner has utilized the drawings from the priority documents. The drawings are objected to because of the use of Japanese text.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Art Unit: 3724

3. The abstract of the disclosure is objected to because it employs legal phraseology, such as “means”, and because it is over 150 words, and because it should not be more than one paragraph. Correction is required. See MPEP § 608.01(b).

4. Applicant is required to provide the Japanese publications mentioned on page 1 of the specification.

5. Claims 2 and 5 are objected to because of the following informalities:

In claim 2, the term “longitudinal direction” lacks proper antecedent basis.

In claim 5, the first 3 lines are redundant to parent claim 4.

Appropriate correction is required.

6. Claims 1-5 and 22-23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is not clear how many substrates are being handled within the claims. For example, claim one only recites “a mother substrate”, or a “small mother substrate”. However, later recitations give the impression that multiple substrates might be involved, such as the reference to “a number of suction members”. Claim 22 has a similar problem.

Claim 5 is a cause-and-effect claim. Basically saying “separating the axis *thereby* dividing along a portion of said scribe line”. Examiner’s understanding is that

Art Unit: 3724

the separation of the axis is for the purpose of avoiding contact between the substrates while flipping (paragraph 0019), and it is the breaking tool which causes dividing.

Accordingly, it is not clear what weight should be given this cause-and-effect recitation.

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 22 and 23 are rejected under 35 U.S.C. 102(e) as being anticipated by Sugiyama et al. (7,128,516), who shows a method of flipping substrates (para. 0002) including the step of employing a number of suction members (figure 6, each hole 14e is its own suction member). Each of these suction members is simultaneously flipped, thus turning over both main faces (top face and bottom face) of the substrate.

In regards to claims 23, it is noted that no processing step is positively recited in the claim. Nonetheless, Examiner notes that substrates are intrinsically “processed” both before and after flipping.

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

Art Unit: 3724

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 1,22 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takamatsu et al. (2004/0155085) in view of Sugiyama et al. (7,128,516).

Takamatsu shows a method of dividing a two-layer substrate including scoring both sides and applying a breaker to both sides, and flipping the substrate in between, as visualized in at least figures 1 and 2.

Takamatsu does not elaborate on what mechanism does the flipping.

However, Sugiyama discloses a device explicitly for this purpose, as discussed in the above rejection. It would have been obvious to one of ordinary skill in the art to have provided Sugiyama's flipping device to Takamatsu, since Takamatsu failed to explicitly detail the flipping device.

11. Claims 1-3, 22 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takamatsu et al. (2004/0155085) in view of Sugiyama et al. (7,128,516), as set forth above, and further in view of Ueyama (7,131,562).

Takamatsu, as modified by Sugiyama above, shows a method with all of the recited steps except the step of dividing the mother substrate into strips and then parallel processing the strips.

Takamatsu is silent on where his strips come from, but it is common to have them arrive after being divided from a mother substrate as seen Ueyama's figure 1. Examiner further takes Official Notice that it is well known to parallel process multiple products. It would have been obvious to one of ordinary skill in the art to have derived

Art Unit: 3724

Takamatsu's strips from a mother substrate, and to have parallel processed them, as is well known, in order to gain the efficiencies of mass production. The parallel processing would naturally involve multiple occurrences of Sugiyama's flipper, with each flipper rotating about its own axis.

12. Claims 1-5,22,23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takamatsu et al. (2004/0155085) in view of Sugiyama et al. (7,128,516) and Ueyama (7,131,562), as set forth above, and further in view of Gray (4,140,258).

Takamatsu, as modified by Sugiyama and Ueyama above, shows a method with all of the recited steps except for the separation of each flipper axis from each other. However, Gray teaches that it is known to do this (lines 54-56, column 1, figures 4a-4e) in order to facilitate subsequent stacking and packaging (lines 10-12, column 1). It would have been obvious to one of ordinary skill in the art to have further modified Takamatsu by providing a separating step for the suction flippers, as taught by Gray, in order to position the substrate products for subsequent stacking and packaging.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenneth Peterson whose telephone number is (571)272-4512. The examiner can normally be reached on Monday-Thursday, 7:30AM-5PM.

Art Unit: 3724

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Boyer Ashley can be reached on (571)272-4502. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kenneth Peterson/  
Primary Examiner, Art Unit 3724